



Gleanings

a monthly newsletter from The Gesneriad Society, Inc.

(articles and photos selected from chapter newsletters, our journal *Gesneriads*, and original sources)

Volume 6, Number 1

January 2015

Welcome to the latest issue of **Gleanings**! This issue includes Karyn Cichocki's photos of petrocosmea blossoms, a visit to Gussie Farrice's growing area, Paul Kroll's article on *Primulina wentsaii*, and Carol Ann Bonner's article on auxins.

Hope you enjoy **Gleanings**!

Mel Grice, Editor

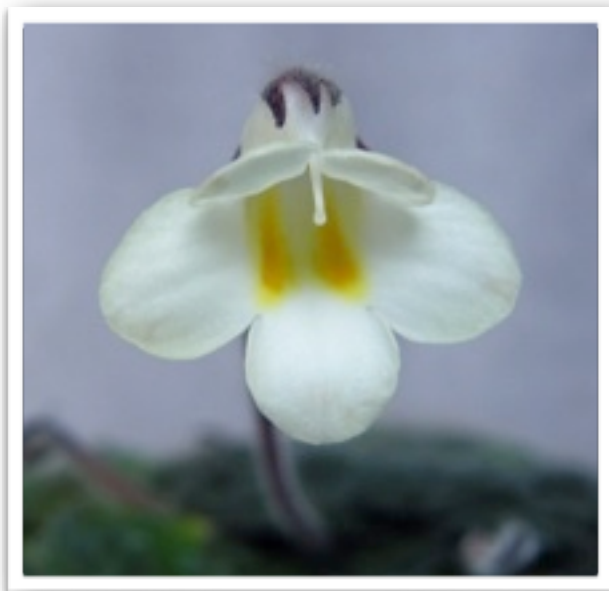


Karyn Cichocki of New Jersey, USA sent these photos of petrocosmea blossoms. *Petrocosmea* sp. "China" (above) and *Petrocosmea formosa* (right). See more petrocosmea blossoms starting on the following page.



Petrocosmea blossoms

Karyn Cichocki kdc05@ptd.net
Lafayette, New Jersey, USA



Petrocosmea begoniifolia



Petrocosmea minor

Karyn Cichocki photos

Petrocosmea minor
(pointed leaf form)





Petrocosmea sp. #5



Petrocosmea cavaleriei ABG collection



Petrocosmea sp. "Yumebutai"



Petrocosmea 'Keystone's Angora'

Karyn Cichocki photos

Petrocosmea #16 or #18
(from Tim Tuttle)



A Visit to Gussie Farrice's Growing Area

Gussie Farrice f.farrice@verizon.net
Staten Island, New York, USA



Gussie loves growing sinningias and primulinas in her basement growing room. All of her plants are grown on reservoirs with wicks. Gussie has been growing some of her sinningia tubers for many years.



Mel Grice
photos



Gussie's basement room is also home to the hybrid seed part of the Gesneriad Society Seed Fund. Carolyn Ripps handles the species portion of the Seed Fund.

All of the seeds are kept in an old refrigerator in one portion of her plant room. The boxes you see in the photo to the left contain vials of seeds of the different hybrid crosses that have been sent to the Seed Fund. The vials are all neatly labeled and standing upright in their own proper slot. (See next page for a closeup)

Gussie painstakingly counts out a specific number of seeds for each individual packet that she makes depending upon the number of seeds available of each cross. She always tries to have several packets of each cross ready to send to Seed Fund customers when they request them (see next page for a closeup).





Thanks, Gussie, for all of your hard work with the Gesneriad Society Seed Fund!

Runner up to Best in Show: *Primulina wentsaii*

Paul Kroll pfkroll@me.com
East Aurora, New York, USA



Primulina wentsaii was given to me by Bill Price in 2011 as a very small plant. It grew slowly but steadily in a soil mix with extra added lime, as I use for all my primulinas, petrocosmeas, and gesnerias. I exhibited this plant as one of five in a collection of primulinas in my local show and that collection won best in show.

When it came time to list possible plants for the Gesneriad Society convention, I listed my *Primulina wentsaii*, along with 15 other possible plants, but wasn't sure it was worthy. While driving down to Nashville, I encountered several construction delays in 98° (F) temperatures! When I arrived at the hotel, and opened the styrofoam boxes, they actually "squirted" steam! I wouldn't have given the proverbial plug nickel for any of my entries! They all appeared "half cooked!" Strangely enough, they recovered over the next couple of days in the air conditioning and I entered them all. I was very surprised to have done as well as I did.

There are very few who grow this plant in the USA. We learned from our Chinese friends that this plant grows very large in the wild. During the winter, when deprived of heat and water, it turns quite reddish in color and then regains the dark green when spring arrives! My plant is grown at the edge of a shelf under two T-8s midway along the shelf. It is watered with the same fertilizer as all my other plants, depending upon the week and the fertilizer du jour. I rotate the fertilizers and once a month I add 1/4 teaspoon of Epsom salts (magnesium sulfate) along with the fertilizer. I also add 1 drop of SuperThrive per gallon along with the fertilizer. That is it! No special care; it grows itself.

Our Chinese friends also said that *Primulina wentsaii* is different from *Primulina ophiopogoides* in that *P. wentsaii* has leaves that are straight, while the leaves of *P. ophiopogoides* twist and turn. These two species require the extra lime, and the whitish spotting on the foliage is actually an exudate of the excess lime! I was advised to write an educational card to accompany my plant so the judges wouldn't think that the white spots were abnormal, perhaps even powdery mildew or something worse. I did that, and then during the walk-through on Saturday morning our Chinese friends enlightened us further on this plant's unusual characteristics.



Mel Grice photo



Julie Mavity-Hudson photo

I will strive to propagate this plant and share it, as always.

This article appeared originally in GESNERIADS Vol. 64, No. 4, Fourth Quarter 2014, Peter Shalit, editor. Read other interesting articles like this about gesneriads by becoming a member of The Gesneriad Society and receiving our quarterly 56-page journal.

Auxins

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Nashville, Tennessee, USA

How is it that you can grow a gesneriad (or a peperomia or crassula or begonia, for that matter) from a leaf? A stem already has nodes, and nodes can produce more leaves or adventitious roots, but a leaf! It doesn't have much of anything.

The answer is complicated, but it pretty much boils down to *auxin*. Auxins are plant hormones that promote growth in specific areas depending on what the plant needs to respond to its surroundings, and they work even though they occur in minute amounts. For example, the weight of hormones in the common pineapple plant compared to the weight of the plant is equivalent to the weight of a needle in 44,000 pounds of hay!

Indole acetic acid or IAA, the most common naturally occurring auxin, is produced in various parts of a plant, primarily the stem tips, and in the African violet, the leaf blade. Auxin is continuously transported down to other parts of the plant, for example, to the growing roots. When the leaf is removed from the plant, IAA is still transported down the petiole where it now accumulates at the base and develops a mass of parenchyma and meristematic cells called a callus. Parenchyma cells retain the ability to divide after maturity while meristematic cells have no predetermined form; they can become phloem or xylem or epidermis — whatever.

As the IAA continues to travel to the callus, the increasing concentration eventually stimulates roots to form. The root tips now produce cytokinin, a different type of plant hormone that causes cell division and differentiation, i.e., it causes the cells to develop into specialized types. The cytokinin is transported back to the callus where it stimulates shoot formation, and a young plantlet is born.



Commercial rooting powders are made from various synthetic auxins at low concentrations. I'm not sure many gesneriad growers use rooting powders anymore. (We have used them only once, I believe, while working at Atlanta Botanical Gardens.) Whether that is because the synthetic auxins aren't as effective with gesneriads as the naturally occurring forms, or the low concentration is too low, or the inert ingredients like talcum powder inhibit growth, I don't know. It's possible to buy pure forms of synthetic auxins, but remember the vanishingly small doses that exist in the plants in nature — too high a concentration not only won't stimulate growth, it can kill your plant! After all, 2,4-dichlorophenoxyacetic acid is a synthetic auxin — and also half of the infamous herbicide Agent Orange.

Sources: <http://www.biologie.uni-hamburg.de/b-online/ibc99/koning/vegpropa.html>

Peter H. Raven, Ray F. Evert *Biology of Plants* (New York, Worth Publishers, 1981)

Callus and root formation image above from <http://masteringhorticulture.blogspot.com/2011/03/starting-life-all-over-again.html> — excellent article, too.

Here's a link to some interesting pictures of A.V. explants and the results of balance versus imbalance between the auxins and other substances needed for growth: http://www.liv.ac.uk/~sd21/tisscult/av_pics.htm

Reprinted from *Gesneri-Eds*, the newsletter of the Tennessee chapter of the Gesneriad Society, Volume 42, issue 3, March 2014, Carol Ann Bonner and Julie Mavity-Hudson, editors.

The Gesneriad Society
presents the 59th Annual Convention
June 30 - July 5, 2015

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for Gesneriad Gold
in the San Francisco Bay Area

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From the editor —

I registered for the Oakland convention. It was quick and easy! Register now at <http://tinyurl.com/k8epaj6>.

Please remember to take good care of your plants so that we have lots of wonderful show plants for the 2015 plant shows!

If you have suggestions, comments, or items for possible inclusion in future issues, please feel free to contact me at melsgrice@earthlink.net

Happy growing in 2015!

Mel

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Paul Susi, Development Chairperson
2 Rushmore Street, South Huntington, NY 11746
For additional information, contact: <development@gesneriadsociety.org>.

Membership and Changes of Address

The Gesneriad Society Membership Secretary, Bob Clark,
1122 East Pike Street, PMB 637, Seattle, WA 98122-3916 USA

Changes of Address — Send changes of address to the Membership Secretary <membership@gesneriadsociety.org> 90 days prior to moving to avoid missing an issue. The Society is not responsible for replacing issues missed because of late notification of address changes. Back issues may be ordered from The Gesneriad Society Publications.

Renewals — Send dues to the Membership Secretary. A Renewal Notice is sent two months prior to the expiration date of your membership. (The expiration date is printed on your mailing label/membership card received with each copy of *Gesneriads*.) Please remit your dues prior to the expiration date to avoid missing an issue as we are not responsible for replacing issues missed because of late payment of dues. Back issues may be ordered from Publications.

Application for Membership — The Gesneriad Society, Inc.

WELCOME — membership in our international society includes quarterly issues of *Gesneriads* — *The Journal for Gesneriad Growers*, a copy of *How to Know and Grow Gesneriads*, a packet of gesneriad seeds and a wealth of information about our chapters, flower shows, publications, research, programs and seed fund. Membership begins upon receipt of dues.

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